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## TYPICAL EARLY MAPS OF THE NEW WORLD.

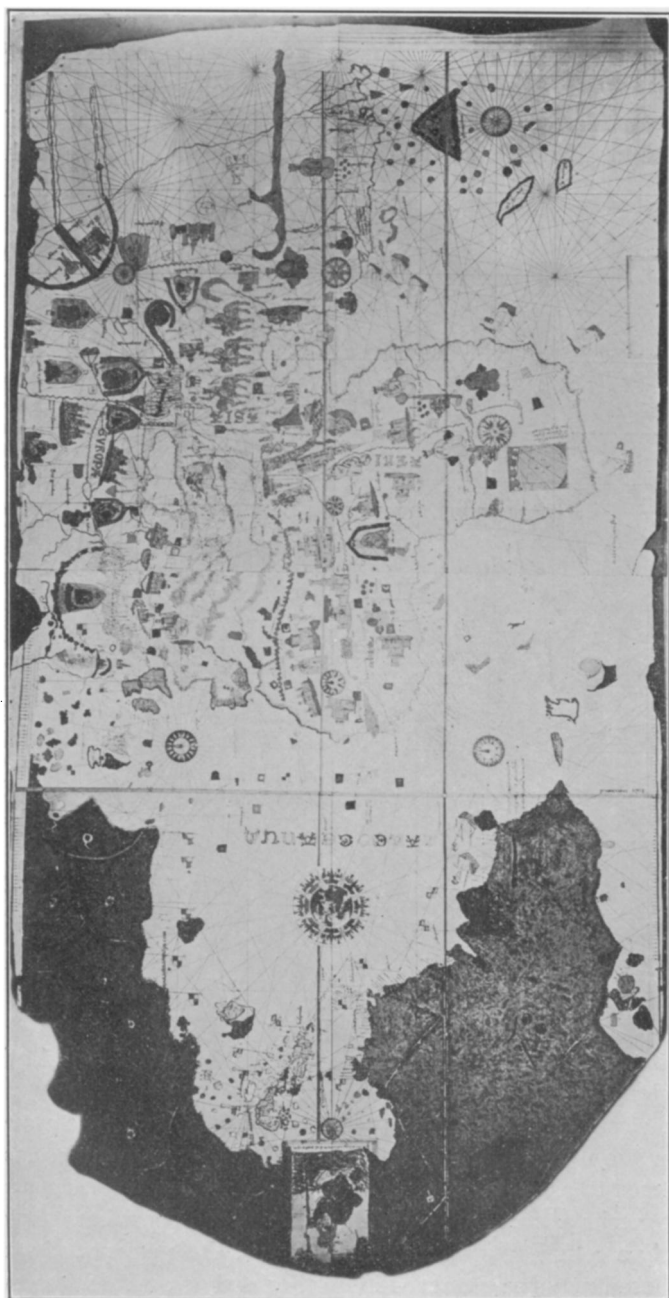
BY

E. L. STEVENSON.

Many schemes may be devised for a classification of the early maps of the New World, any one of which may be made to serve a useful purpose in their study and exposition.

In this paper it is proposed to present a classification which is based upon the more general features of the maps rather than one in which the chronological element is fundamental, or the development of any special coast areas in particular enters. The original maps, the coast sketches made by pilots, captains, and professional draughtsmen who accompanied early expeditions to the New World, with scarcely an exception, have been lost or destroyed. The typical maps, therefore, as all maps, are derivatives, not originals in the sense to which I have just alluded, into the composition of which many coast sketches, many descriptive records, have entered. Kohl has observed that with no class of historical documents has time been more destructive than with old maps. The many that have come down to us are but a remnant of the many which were constructed in those early years—a fact to which numerous references in the literature of the period bear witness. In these survivals, however, there are certain types, a careful study of which is instructive and interesting.

Very naturally, one would expect to find greatest activity in the charting of the new coasts in those countries most directly interested in maritime exploration, and among the productions of these countries to find the maps of greatest importance draughted during the period of discovery. Yet in this connection the following facts are worthy of note: The Juan de la Cosa map is the only important one known, draughted in Spain, during the first thirty years after Columbus opened the way to the new regions of the west; the Portuguese influence during the same period is most strikingly pronounced in the maps extant which lay down the new coasts; although the native Italians were the most prominent explorers and map-makers who served the kings of Spain and of Portugal, the Italian cartographers at home exhibited a tardy interest in adding these new coasts to their world maps, but after the middle of the century their work came to be of first importance; the Germans, though occupying



JUAN DE LA COSA.

an inland country, through their interest in the new scientific studies, particularly geography and mathematics, exerted an influence upon the cartography of the New World during the early decades of the sixteenth century unsurpassed by any other country of Europe; French cartography of the New World is of late origin, exhibiting from the first both Spanish and Portuguese influence, while the im-



MUNICH-PORTUGUESE (1502?)

portant cartographical documents of the Low Countries and of England belong to the late sixteenth century.

In the scheme of classification here presented it may be a question whether the work of Columbus' companion, Juan de la Cosa, should be referred to as representing a type of early New World maps. It at least merits a word by reason of the important position it holds. It is clearly a compiled map, and a number of the elements of which it is composed may have entered into other early maps. If, however, it exerted an influence on contemporary or subsequent cartographical

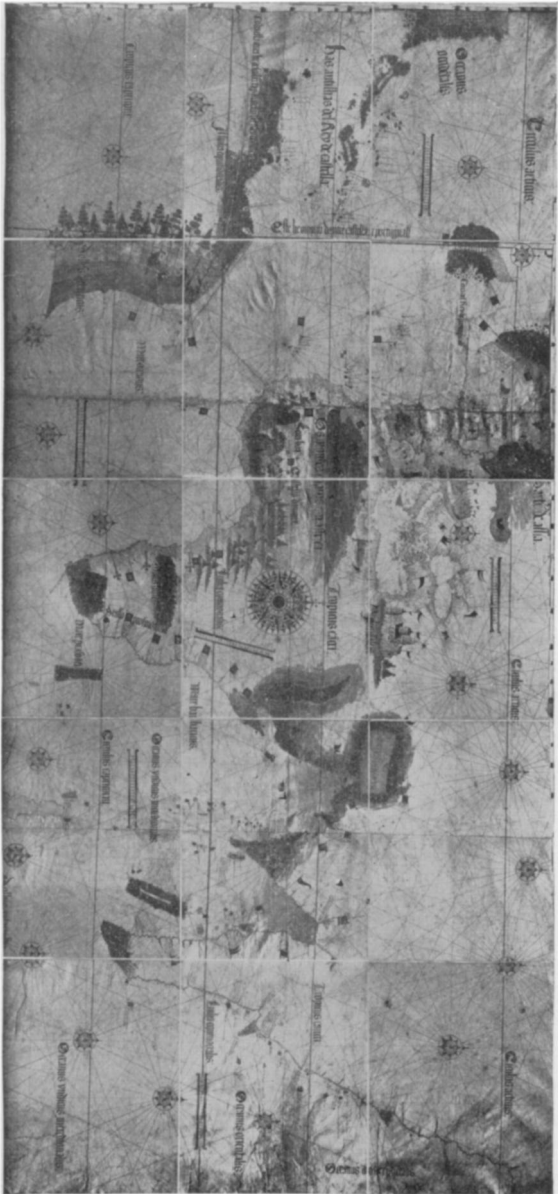
work, that influence is difficult to trace, although in one or two of its special features, as in the peculiar contour of Cuba, it appears to have a companion in the Oliveriana. The proposition that it reproduces actual coast surveys which were made along the Atlantic seaboard, however hasty and general in character they may have been, is not to be dismissed merely because unsupported by contemporaneous written accounts.

It is reasonable to assume that the earliest general maps of western discoveries represented the new regions as a group of islands. It was the belief of Columbus that he had "found many islands." Maps, therefore, of the New World in which the insular character of the land discovered is made prominent, constitute what I shall call the first type. These maps are not numerous; nor are those of the type which have come down to us the oldest-known New World maps. They do not give indication that they are copies of a common original, although they are pronouncedly Portuguese. By reason of certain peculiarities, they may well be divided into two groups, to the first of which belong the Hamy and the Munich-Portuguese charts of about the same date, which is before 1503. They are maps *in plano*. To the second group belong the Lenox Globe, the Winsor or Da Vinci gores, the Jagellonicus Globe, and, lastly, the unique but small and unimportant map produced in Venice in the year 1528 by Pietro Coppo. The second group, with the exception of the last named, may be called globe maps. In very nearly all of the maps of the first quarter of the sixteenth century Cuba is made to lie too far to northward. In our first group, as above mentioned, it has this incorrect position, with a very decided trend to northwest, extending from about the thirtieth to about the fiftieth parallel of north latitude. The Cortereal discoveries are recorded, and as much of the South American coast as had been explored by the Portuguese navigators.

The three globe-maps of the second group appear to attach but little importance to the Spanish Antilles, laying down only a few of those islands. They give but slight intimation of a knowledge that a continental region lies to the northwest of those islands, although South America is given with an area almost continental, having a well-defined circumscribed coast-line.

The two charts preserved in Munich and believed to have been the work of Pedro Reinal and of Pilestrina may be taken as conspicuous examples of the second type of Portuguese work. Spanish discoveries do not receive recognition—a fact, however, not to be considered as indicating a want of knowledge of such discoveries, but rather a purpose to emphasize the claims of the Portuguese to lands

CANTINO.



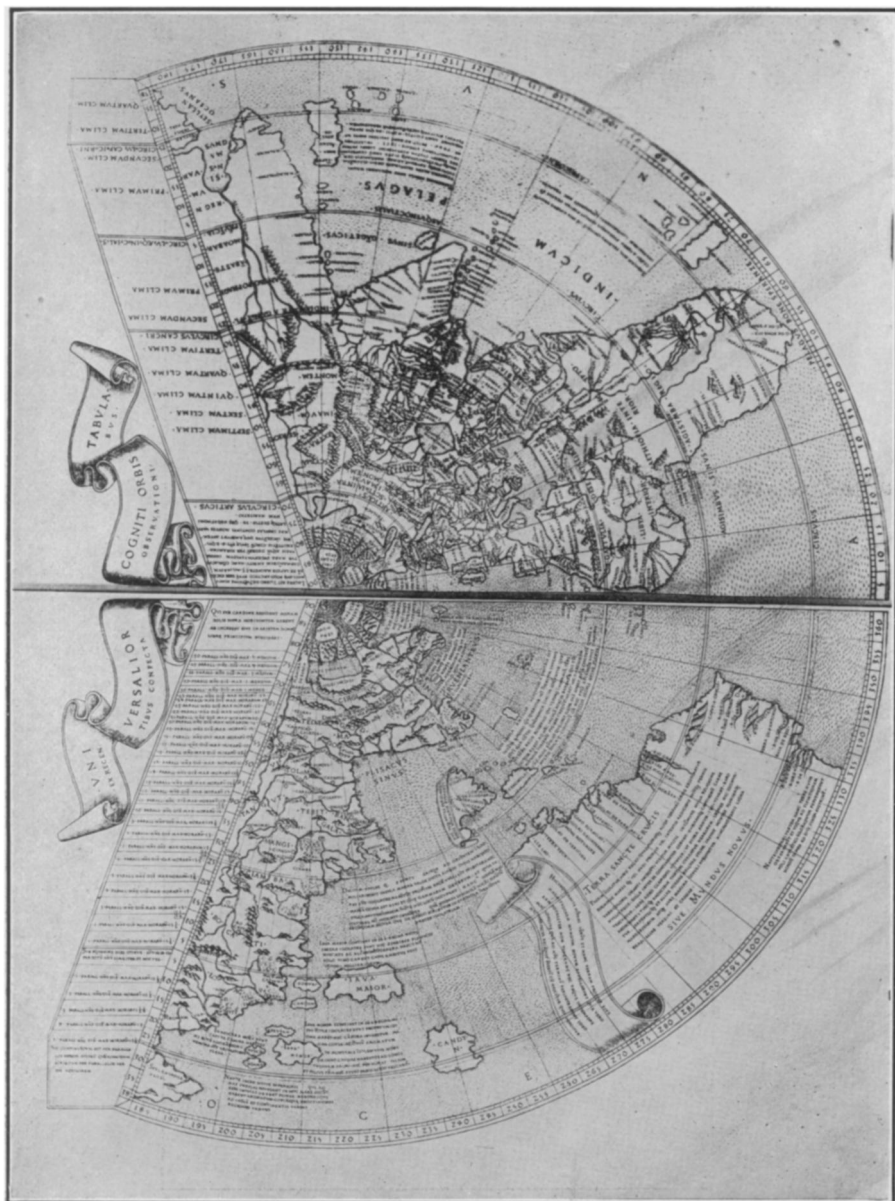
in the west. Early maps of the New World of this special character, that is so exclusively national, are not numerous, as the great majority, in their general features, give a record more nearly complete of the knowledge possessed to date.

Before the discovery of America the Portuguese held the leadership among nations interested in maritime exploration, and the fame of their enterprises was matter of common report throughout Europe. This fact, in part at least, accounts for the great popularity of early Portuguese charts of the western lands and the apparently greater influence of early Portuguese cartography. It is probable that the Portuguese Government pursued a more liberal policy with regard to the spread of information concerning western discoveries than did the Government of Spain. A jealousy of recent Spanish successes might easily have prompted such a course.

It was the Cortereal discoveries to the north of the Spanish claims, and the Cabral discoveries to the south, which especially stimulated Portuguese ambition for possession in the west at the opening of the sixteenth century and encouraged the construction of new maps which were to contain the latest information. Duke Hercules' instruction to Cantino, his Envoy at the Court of King Emanuel, assures us of this fact. A third type of early maps appears to have had its origin about this time, which type proved to be one of the most influential and interesting. Two very early examples of this type have come down to us, both of which have but recently become known, the first being the work of Duke Hercules' Envoy, and the second the work of Nicolo de Canerio Januensis, as he refers to himself on his map. These maps give prominence to the land supposed to have been visited by the Cortereals and, very conspicuously, the continental regions lying to the north and the south of the Spanish Antilles. The west or Pacific coast-line of the new lands is altogether omitted. In the maps of this type the two continental areas are represented as separated by a body of water, indicating either a belief in the existence of a strait leading from Oceanus Occidentalis into Oceanus Orientalis, or a belief that that particular region was one which had not yet been explored. There is little justification for the statement that these maps give evidence of a belief in an Asiatic connection of the new lands; the nomenclature does not support such a theory. They suggest the possession of knowledge gained directly from coast charts and from written accounts, but information which in part may have been taken from clandestine voyagers. Whatever the sources, here is certainly record of discoveries actually made and reported along the Atlantic coast before Ponce de Leon, or Ayllon,

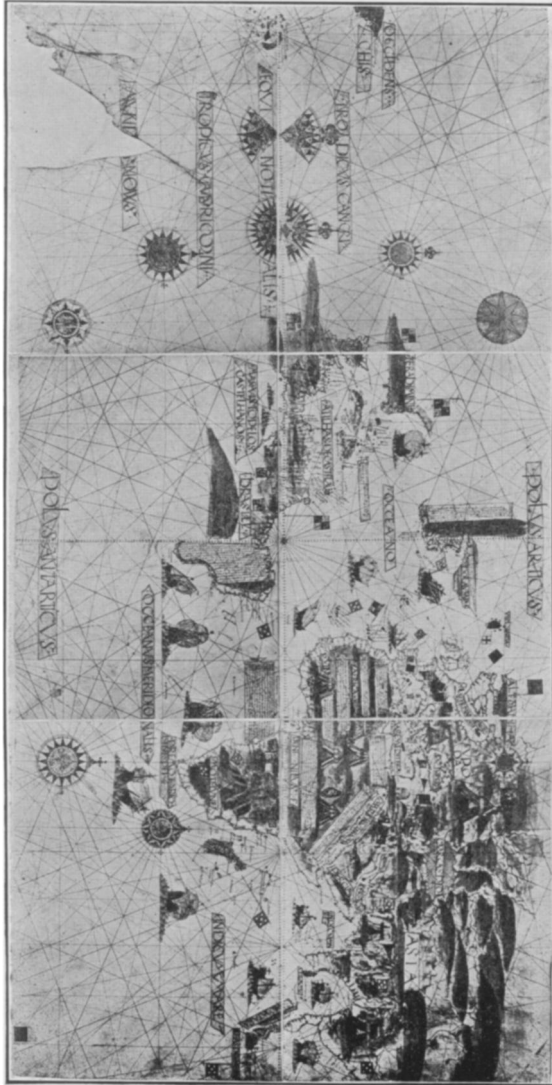






or Gomez turned their prows in that direction. Naturally enough, the Ptolemaic maps could not serve as pattern for the new regions, particularly in the west; and it is an interesting fact that in this type we find the first decided break with Ptolemaic traditions for the

MUNICH-PORTUGUESE (1519?)



regions of India and the east beyond. It was this early Portuguese type which, finding its way into Germany, became the basis of a most important series of maps of the New World, of which I shall speak later.

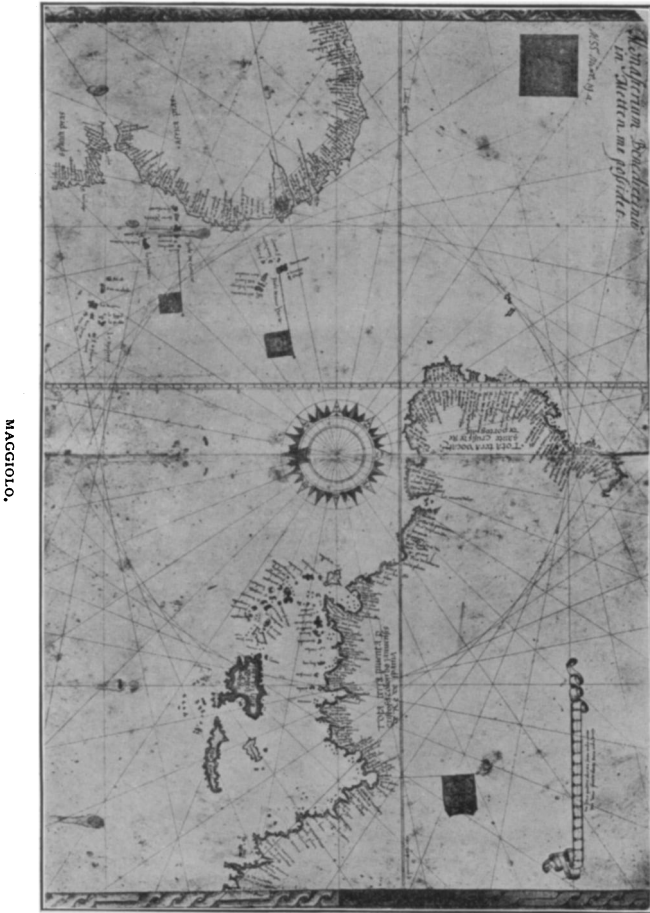
The Ruysch map, to be found in an edition of Ptolemy, printed in Rome in the year 1508, may be considered as representing an early type, although, like the Juan de la Cosa, it seems not to have exerted a very marked influence on the cartography of the period. Until recently it enjoyed the reputation of being the oldest-known engraved map on which the New World appeared. Concerning the question as to whether the new lands were a part of Asia, it seems to represent a compromise. Greenland and the Newfoundland regions are laid down as a part of the Asiatic mainland; while a legend forming the western border of one of the northern islands tells that Zipango has been omitted because that island is thought to be identical with the one touched by the ships of King Ferdinand, and a legend to the south, in defense of the term *Mundus Novus*, states that that region is so called because of its great extent.

The map seems to show some kinship to those early Portuguese maps in which the newly-discovered lands are represented as a group of islands, but gives evidence of an advance in knowledge the exact source of which is unknown.

The type of map produced in Germany to which I have alluded, and which I shall call Lusitano-Germanic, is especially noteworthy.

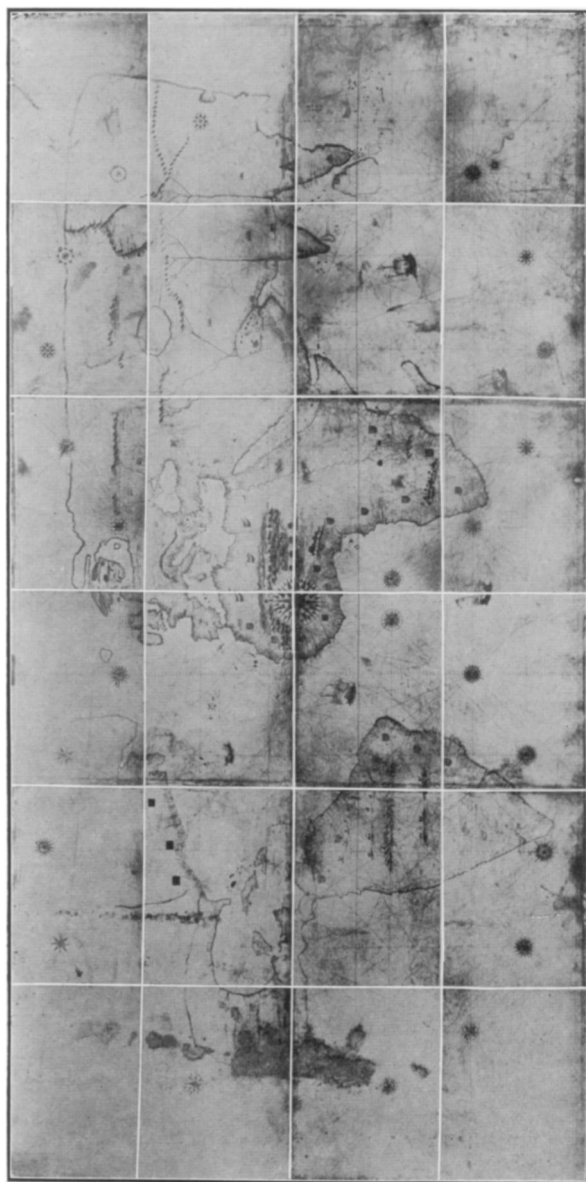
Its origin seems to date from the arrival in the village of St. Dié, Lorraine, of the Vespuccian Letters and a marine chart from Portugal, to which Lud refers in his little work the *Speculum*. Here was material, through Duke René's coterie of learned men, which, if worked into an edition of Ptolemy, then in preparation for the press, would give that edition an added interest in the eyes of the scientific world. Especial interest now centres in the cartographical work produced in that little village where Renaissance culture flourished under enlightened patronage. Among those most prominent in that learned circle, to which the name Vosgian Gymnasium was given, none is better known to fame than Martin Waldseemüller, who won distinction through his interest in cosmography. He has long been popularly known as the one who first suggested the use of the name America for a part of the new region, fortune favouring in time a use of the name for the entire continent. But there is none the less interest now centring in the maps of which he was the author than there has been in the circumstances under which he had first proposed the name. The first of his maps—one to which he repeatedly alludes in his little book *Cosmographiæ Introductio*—is the one of which Professor Fischer recently was the fortunate discoverer, and which is attracting so greatly the attention of students of cartography. Its interest, however, for this paper lies in the type of

which it is the most conspicuous example—indeed, of which it seems to be the original. Not to enter too minutely into details, it may be noted that it clearly follows Portuguese originals for the recently-discovered regions, and Ptolemy, in the main, for the countries known to that ancient cosmographer. There can be little question



MAGGIOLO.

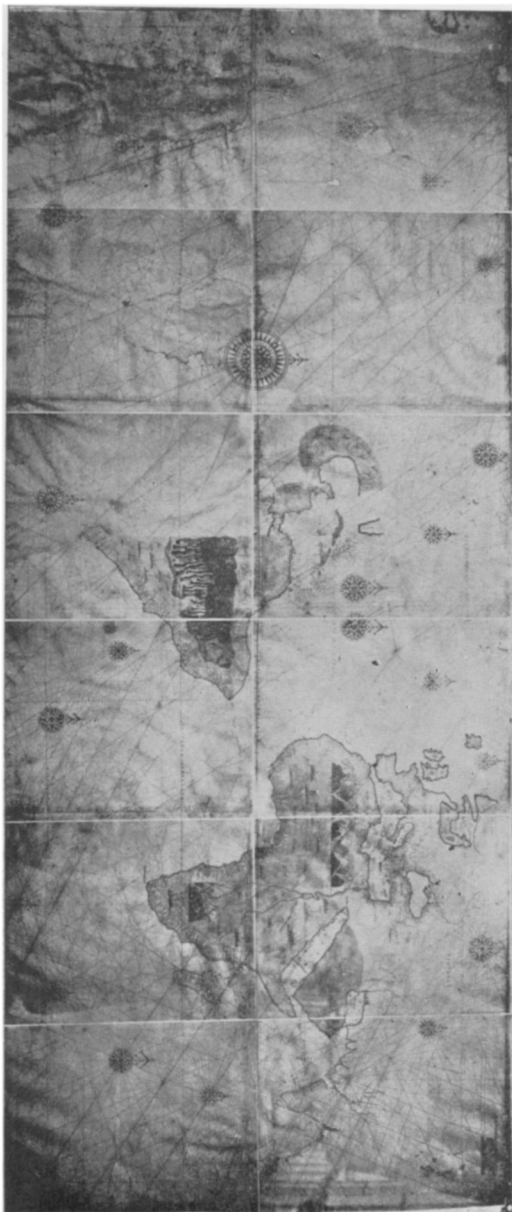
that Waldseemüller had the marine chart of Canerio, or one almost identical with it, before him while he was at work on his world map of 1507, and especially when working out his map of 1516. Proof positive we do not have that a large part of the information here recorded concerning the New World is from Vespuccian data, but there is much which suggests it. It is noteworthy that Waldseemüller exhibits in his map of 1507 the two forms to be met with in



VERAZANO.

the type, indicating as he does, in the small inset map which he has introduced at the top, a land connection between North and South America, while on the large map he has laid down the body of water

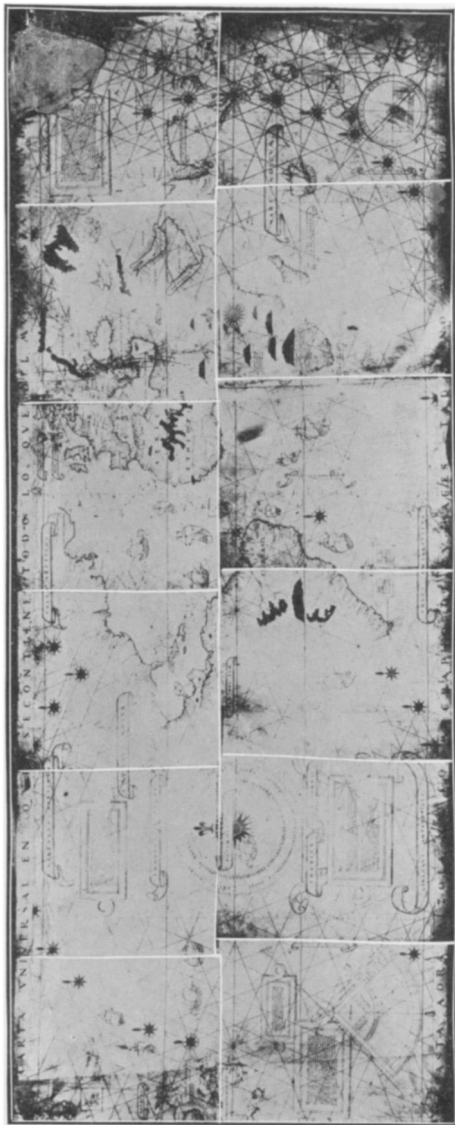
which is generally indicated on Portuguese maps as flowing between them—that is, the strait, as it is often called. He has shown great originality in the projection chosen for his map. He clearly expresses the belief that an ocean lies between the new regions and Asia. He locates the Cortereal discoveries far to the northeast of the north continental area, as was often done, that it might lie east of the Line of Demarcation, hence within Portuguese territory, and he gives to the south a terminus in almost its proper latitude. It is on the maps of this type that the name America is geographically fixed for the first time. The type is a prevailing one for many years, particularly in Ger-



TURIN-SPANISH.

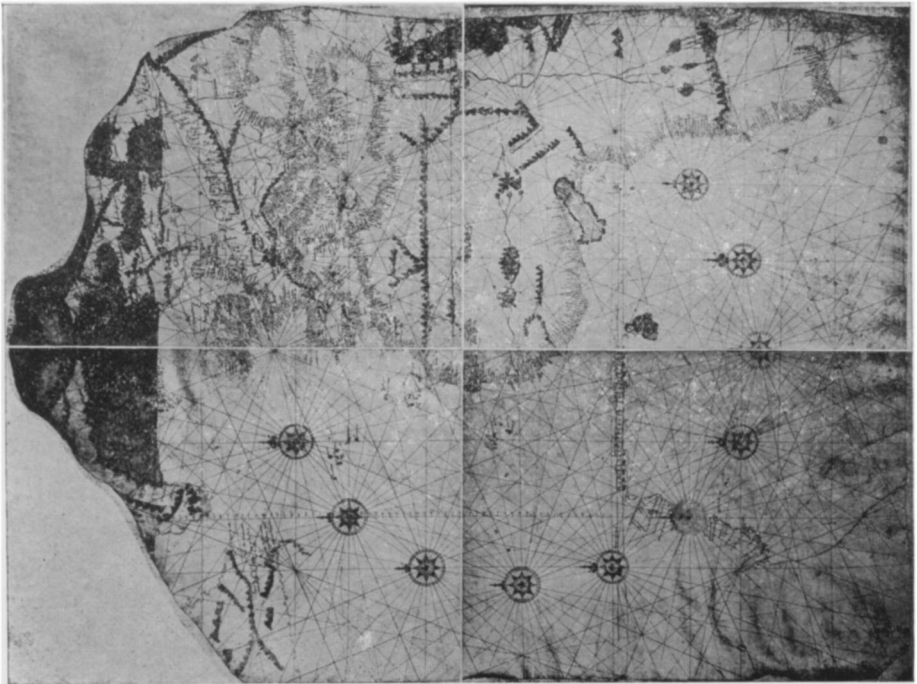
many; and the map-makers of that country, especially during the first quarter of the century, held first rank among those who attempted to represent pictorially the New World. Even late in the century we find the type exerting an influence, although, through the continued accumulation of information, the early outline was somewhat re-fashioned. The type includes many maps *in plano*, to use an expression of Waldseemüller, among which the New World maps first appearing in the Strasburg edition of Ptolemy of 1513 and in many editions thereafter, the maps of Glareanus, Stobnicza, Apianus, Frisius, Münster, and Honterus are prominent. Of the globe and gore maps which reproduce the type there is likewise a considerable number, of which the Hauslab, the Nordenskiöld, the Tross, and the Schöner gores are conspicuous examples.

With the exception of the rough pen-sketch maps attributed to Bartholomew Columbus and discovered but a few years ago by Professor Wieser, none of the early maps clearly indicate a belief in an Asiatic connection of the western lands. Quite the contrary, as I have stated. It is not until about 1526 that we meet with an interesting reversion to the idea which



WEINAR-SPANISH.

Columbus professed to have entertained. Some of the students of cartography attribute this reversion to the letters of Cortes, and to the observations of Peter Martyr in his *Enchiridion*. By others the type is thought to have been derived from Schöner's globe of 1523 and a small tract which he wrote in that year. For many years after 1526 the idea of an Asiatic connection found favour with certain cartographers, and was often repeated. It seemed to come and go with the years from this time on as fact or fancy dictated, until the discovery of Bering put an end to the controversy.



PILESTRINA.

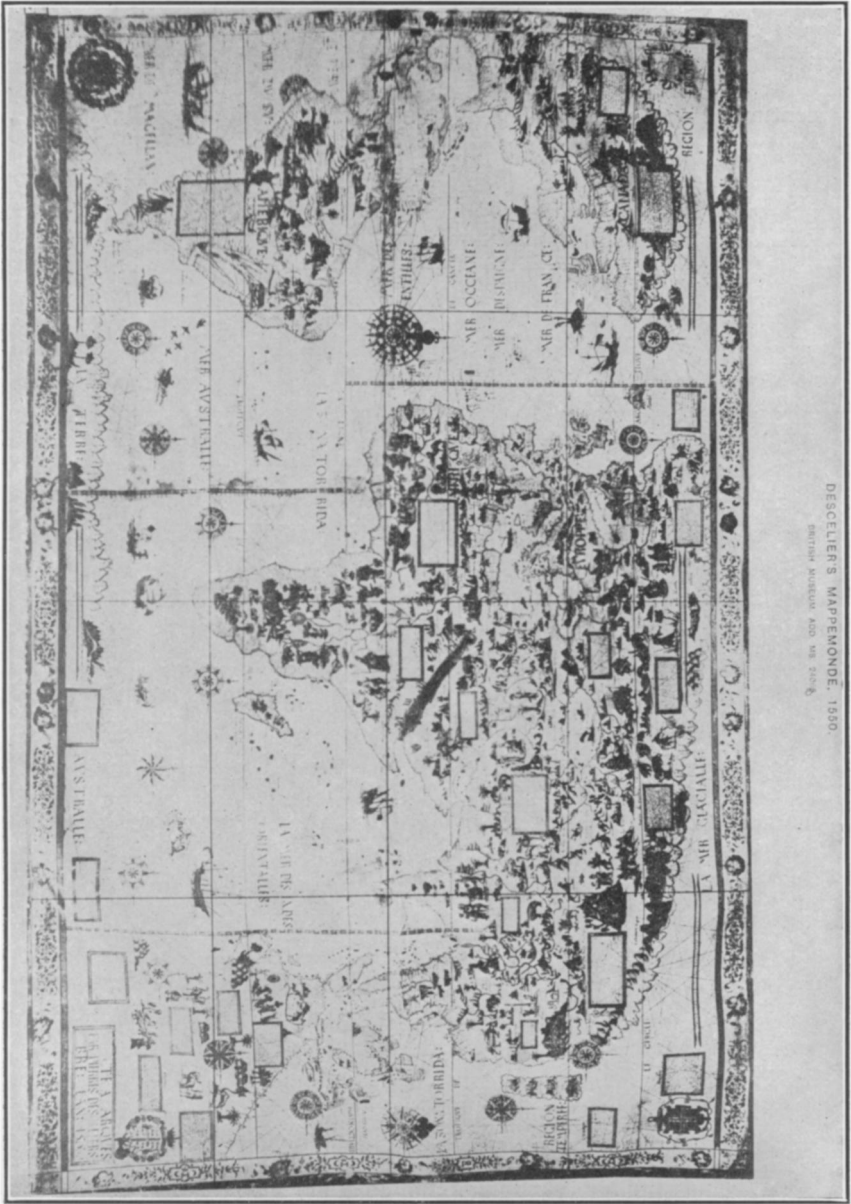
In a work by Franciscus Monachus of Belgium, which he called "*De Orbis Situ*," and which was printed in Antwerp in the year 1526, we find the idea of an Asiatic connection expressed—and unmistakably so expressed—for the first time after the Columbus maps. Franciscus takes occasion in his text to criticise the Ruysch map of 1508, which indicates that the north continental region is separated from the south. He further states—what he found to be a common belief—that a sea existed between the New and the Old World: that is, between America and Asia; but to this opinion he likewise ob-



jects. The map is crude, and exhibits, in addition to the Asiatic connection, a continuous Atlantic coast-line, excepting the representation of a doubtful strait, from the extreme north to the extreme south, and is among the first to lay down an austral continent. The type is represented by a number of maps before the close of the century, including the Paris Wooden and the Gilt Globe, the Sloane manuscript map, the 1531 map of Finæus, the Nancy Globe, the Globe of Gaspar Vopel, the Schöner Globe of 1533 and a British Museum manuscript map of about 1528, here chosen to represent the type. It finds an interesting modification in the Gastaldi map of 1548 and in the map of Homem of 1561, in which both an Asiatic and a European connection are indicated.

If in the maps constructed within the earliest years of discovery there should be a decided lack of agreement in the position, extent, and contour of the new lands, the fact should not be considered a surprising one. The charts were of various origins. It was very early in the sixteenth century that this diversity began to lead to confusion in territorial claims, and was noted as an element of danger for navigators. In 1508 the Spanish Government took steps calculated to insure the use of correct charts by captains sailing for the new lands from Spanish ports. It was ordered in that year that an official map—a *padron real*—should be drawn, upon which should be laid down “all the lands, and islands of the Indies hitherto discovered and belonging to the crown,” and that pilots should mark on this map “every land, island, bay, harbour, and other things new and worthy of being noted.” Information acquired by the navigators should be immediately reported to the Pilot Major on return from the voyage. The discovery of this first pattern map would prove to be of great interest and importance.

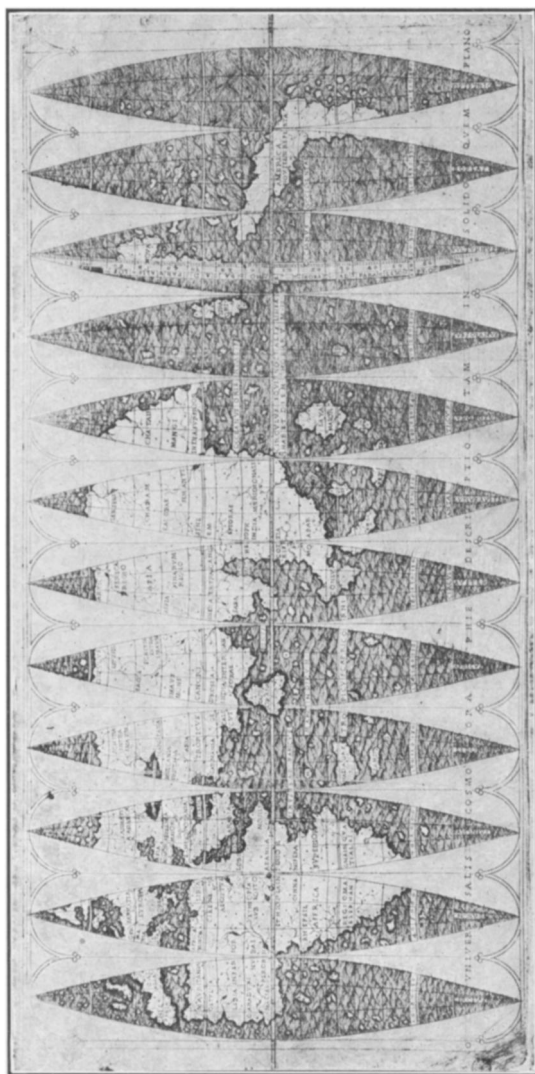
Between the issue of the royal order and the date of the oldest-known Spanish map, which seems beyond question to have been fashioned, in its main features, upon principles laid down in the decree, nearly twenty years intervene. Yet we know that efforts were not wanting in this period to make the decree effective; indeed, there are two or three important maps extant which have been thought to be, in part, copies, though considerably modified, of official pattern maps. We learn that about 1515 the Pilot Major Solis had constructed such a map, and that it was one of the documents laid before the Junta of that year which had been called together to settle disputes between Spain and Portugal respecting claims to lands in the west. The Solis map we do not now possess; but Kohl thought that we have in the Maggiolo map of 1519 a reproduction of its South



DESCELLER, 1550.

American part which especially emphasizes Spanish claims, and that in the Munich-Portuguese map of about 1519 we have a Portuguese modification of the same. It is interesting to note that in this last-named map, for the first time, the Line of Demarcation represents the Prime Meridian, and Florida is called *Terra Bimini*.

In these, then, we may have what were intended to be specific types—that is, pattern maps. If the Maggiolo map referred to may be taken as representing a section of the Spanish pattern map for that early date, it seems probable that in the Turin-Spanish map of about 1523 we likewise have a transcription of the official map, and a map with fuller data. It is an anonymous map, the richest of the century in nomenclature for the regions indicated. It represents Florida (*isla Florida*), perhaps, from Ponce de Leon data, the Gulf region clearly from the Cortes

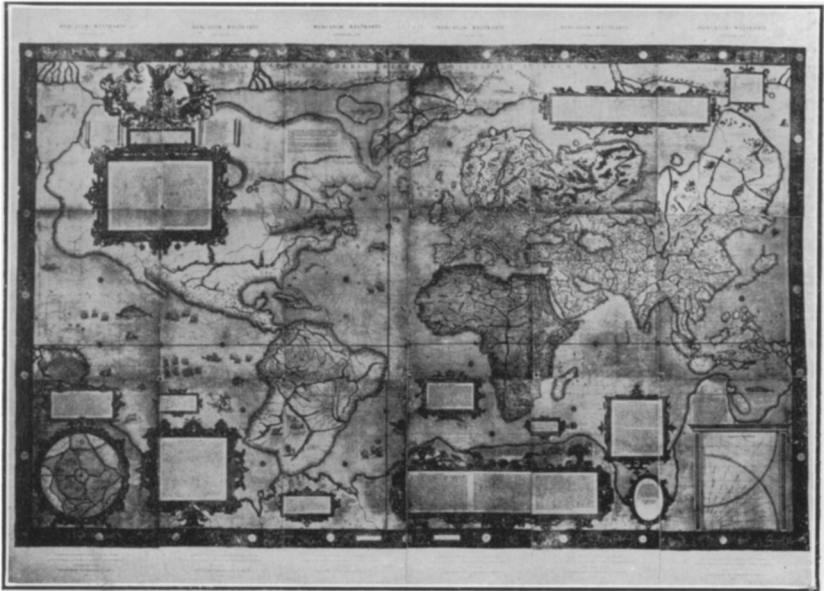


TROSS CORES.

sketch, and South America, including data as late as that obtained from the Magellan voyage (see "*Tierra dizembre*" on the Pacific coast).

It was in 1526 that the order was issued for a new padron real to be constructed under the direction of Ferdinand Columbus, president of the Junta called to meet that year. Kohl believes that the anonymous Weimar map of 1527 is the work of that Commission.

While it is very doubtful that Columbus was the author of that map, nor with any greater degree of certainty is it to be ascribed to Garcia de Torino, and while it is also doubtful that it is an official pattern map, it at least appears to be one constructed from data furnished by the Casa de Contratación. It fulfills the conditions of



MERCATOR.

a pattern map, at least, in laying down a more nearly complete record of western exploration than had hitherto appeared, including an unbroken Atlantic coast-line from about  $60^{\circ}$  north latitude to  $54^{\circ}$  south. It represents a type which in succeeding years was often reproduced after Portuguese cartography began to yield in importance to that of Sevillian origin. A most striking contour feature of the type is the very rapid trend to eastward of the Atlantic coast-line of North America—a feature which is almost a distinguishing mark of Sevillian influence.

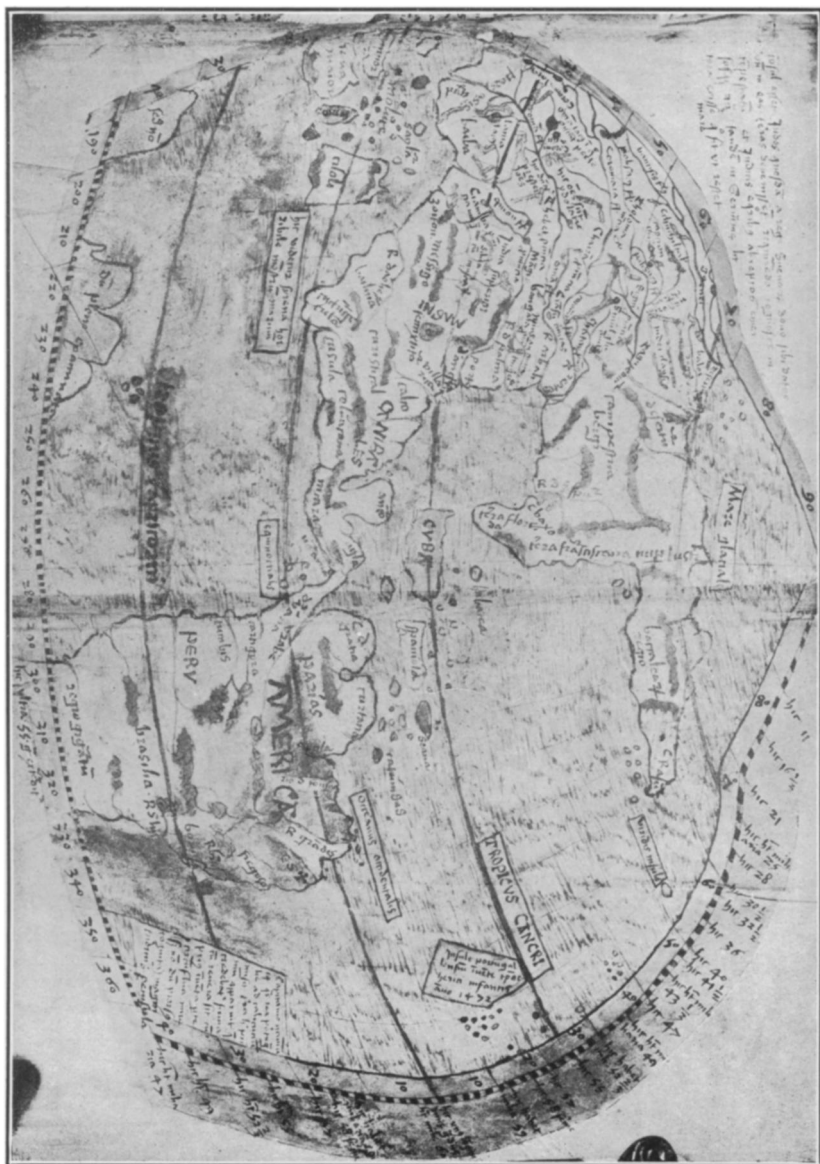
These maps are the first to make record of the discoveries of Ayllon and Gomez. They lay down only so much of the Pacific coast-line as had been explored and reported to date, and they elimi-

nate what had appeared in earlier maps as in large part conjecture. To this type belong the Ribero maps, the Weimar-Spanish of 1527, the Wolfenbüttel map of about 1529, the Agnese maps, with very many others.

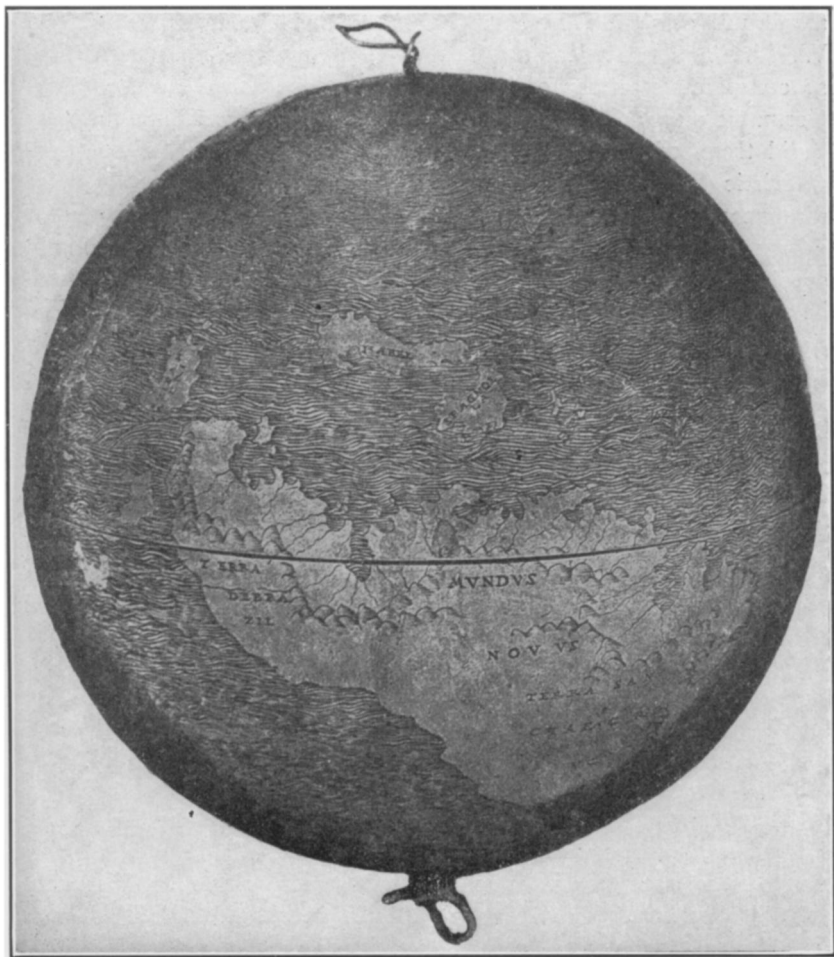
There is a type of early maps based, it seems, in its most striking features, on the Verrazano voyage of discovery, which first appears in the Maggiolo map of 1527. Although presenting a continuous Atlantic coast-line, as the Spanish type above referred to, broken only on the Maggiolo map by a "streto dubitoso" south of Yucatan, the type is clearly not from a Spanish original. The nomenclature indicates as much, as does also the trend of coast-line northward from the peninsula of Florida. A most striking feature of the type is the peculiar contour of the west or Pacific coast. South America thus early is given a complete coast-line, although on the west, in the earliest of the type, it is "terra incognita," while from the Central American region the Pacific coast-line sweeps northward with a wide, extended curve, and, almost parallel with the coast-line of the Gulf of Mexico, approaches the Atlantic coast not far from the region of Cape Hatteras. Here, says the Verrazano map of two years later date than the Maggiolo map, is an isthmus six miles wide. On the land which broadens to the north we read on several maps of the type the evidence of French discovery in the name "Francesca" or "Nova Gallia," with such coast names as "Diepa," "Anaflor," "Anguileme." The water on the west of the isthmus referred to becomes on some of the later maps of the type "The Sea of Verrazano." The type is one often reproduced, and is well represented in the Maggiolo 1527, the Verrazano of 1529, the Münster of 1540, the world maps of Agnese, and the Lok map of 1582.

Not until the Cartier voyages of discovery does there appear a prominent French type of early New World maps. As the most important of the early Spanish maps seem to have been the work of the Seville cartographers, so the early important French maps appear as the work of a Dieppe school, to which school belong such cartographers as Desliens and Desceliers. While the work of the Dieppe school seems to have been fashioned to a considerable extent on Spanish originals, Portuguese influence is likewise pronounced. The sources, indeed, seem to have been many, and the draughtsmanship to have been of a high order.

All maps of the type show a continuous Atlantic coast-line, with a fair degree of accuracy. The South American coast is complete, while the interior region of North America is now sketched with some detail. Very naturally, the north Atlantic coast—that is, the



region in the vicinity of the Gulf of St. Lawrence—is now given with a near approach to accuracy. In most of the maps of this type considerable artistic skill is exhibited. Pictures are numerous, suggesting a return of the idea so pronounced in the most important mediæval maps. To the work of the French cartographers referred



LENOX GLOBE.

to, as best representing this particular type, may be added a few which, in nomenclature, appear to be of Portuguese origin.

Although toward the close of the first half of the sixteenth century a few maps were drawn which indicated with an approach to

accuracy the contour and correct relative size of North America, and its separation by a strait from Asia, it is the Mercator world map of 1569, the first of importance, on which these features are well presented. While the new—and, in the main, original—projection employed by Mercator in this map led to great distortion in the extreme northern regions, the type of which it is the most conspicuous example presents the New World as a continent apart from the Old World. The strait leading from the Atlantic into the South Sea, so conspicuous on the early Portuguese maps as on the Lusitano-Germanic maps, above referred to, has disappeared, as has the very rapid trend of the Atlantic coast-line of North America, so characteristic of early Spanish maps. Verrazano's Sea has likewise disappeared, and the Pacific coast-line is complete, although as yet drawn, in great part, according to conjecture. There are many special features of the type, to one of which only will reference here be made, and this is the peculiar trend of the lower Pacific coast of South America. For this inaccuracy no satisfactory explanation has been given. It, however, is a marked feature of the Mercator maps, reappearing in the Ortelius, the Myritius, the Cornelius de Judæis, and in a number of other maps in which the Mercator influence is decidedly traceable.

It will not for one moment be contended that maps of this type give us a correct presentation of the Western Continent; the errors are still numerous. We do, however, have the Western Hemisphere, as has been said, with outlines approaching accuracy.

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#### THE MIKKELSEN-LEFFINGWELL EXPEDITION.

The Society received, on March 9, a letter from Captain Ejnar Mikkelsen, joint commander with Mr. E. K. Leffingwell of the Anglo-American Polar Expedition. It was written at Flaxman Island, on the northeast coast of Alaska in about 146° W. Long. The letter was probably written in September or October last. Means were found to send it south, and it is marked as received at the office of the Royal Mounted Police, Dawson, Canada, on Feb. 17, 1907. The letter follows:

“The season of ice navigation has been so unfavourable that the expedition could not reach the desired winter quarters in Minto Inlet. The chance of attaining that point in Prince Albert Land